



TECHNICAL BULLETIN **Energy Codes** **Residential Additions, September 1, 2002**

The requirements set out in this technical bulletin apply to additions (other than sunrooms) to single family residences with a conditioned floor area of less than 500 square feet in floor area. Building additions equal to or in excess of 500 square feet must comply with the requirements for new construction.

The following general rules apply:

- ❑ The *U*-factor of each individual fenestration product shall be used to calculate an area-weighted average fenestration product *U*-factor for the addition, which cannot exceed the value in the table below.
- ❑ For additions other than sunrooms, the total area of fenestration products shall not exceed 40% of the gross wall and roof area of the addition.
- ❑ The *R*-values for the walls, ceilings and floors shall be as indicated in the table below.
- ❑ Replacement fenestrations (where the entire unit, including the frame, sash and glazing, is replaced) shall meet the *U*-factor in the table below.
- ❑ The area weighted average of all new and replacement glazed fenestrations (where the entire unit, including the frame, sash and glazing, is replaced) shall not exceed 0.4, except:
 - Any glazing facing within 45 degrees of true north.
 - Any glazing facing within 45 degrees of true south which is shaded along its full width by a permanent overhang with a projection factor of 0.3 or greater.
 - Any fenestration with attached screens where the screens have a rated shading coefficient of 0.6 or less.

| Maximum | Minimum | | | | |
|----------------------------------|--|----------------------|-----------------------|---|--|
| Fenestration <i>U</i> -Factor | Ceiling <i>R</i> - value ^a | Wall <i>R</i> -value | Floor <i>R</i> -value | Basement Wall <i>R</i> -value ^b | Crawl space wall <i>R</i> -value ^d |
| 0.5 | R-30 | R-13 | R-19 | R-8 | R-10 |

^a "Ceiling *R*-value shall be required for flat or inclined (cathedral ceilings. Floors over outside air shall meet "Ceiling *R*-value requirements.

^b Basement wall insulation shall be installed in accordance with section 502.2.1.6.

^d "Crawl space wall *R*-value" shall apply to unventilated crawl spaces only. Crawl space insulation shall be installed in accordance with Section 502.2.1.5.